



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

June 9, 2017

Maria Herrero  
Valent BioSciences LLC  
870 Technology Way  
Libertyville, IL 60048

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment –  
Amendment to Reorganize and to Move Uses Among Sublabels  
Product Name: ProGibb 4% Plant Growth Regulator Solution  
EPA Registration Number: 73049-15  
Application Date: 3/10/17  
OPP Decision Number: 527238

Dear Ms. Herrero:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency (EPA). If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false

Page 2 of 2  
EPA Reg. No. 73049-15  
OPP Decision No. 527238

or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Chris Pfeifer of my team by phone at (703) 308-0031 or via email at [pfeifer.chris@epa.gov](mailto:pfeifer.chris@epa.gov).

Sincerely,



Andrew Bryceland, Team Leader  
Biochemical Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511P)  
Office of Pesticide Programs

Enclosure

**LABEL AMENDMENT**

[Text in brackets [ ] indicates optional language or language intended for explanatory purposes to facilitate label review. Thus, this language will often not appear on final printed labeling. Also, this page is present (page 1) to delineate sublabels and will not appear on the final printed labeling.]

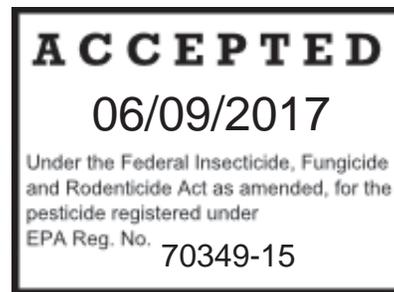
**PROGIBB 4%  
PLANT GROWTH REGULATOR SOLUTION**

[Alternate Brand Names: ProGibb T&O Plant Growth Regulator Solution and ProGibb TVO Plant Growth Regulator Solution]

**MASTER LABEL**

Sublabel I: Agricultural Use

Sublabel II: Turf, Vegetables and Ornamental Use



Active Ingredient:	<u>% Content</u>
Gibberellic Acid.....	4.0% w/w
Other Ingredients.....	.96.0% w/w
Total.....	100.0% w/w

ProGibb 4% Plant Growth Regulator Solution contains approximately 1.0 gram active ingredient per fluid ounce of formulated product.

**KEEP OUT OF REACH OF CHILDREN  
WARNING - AVISO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail).

For MEDICAL and TRANSPORT Emergencies ONLY Call 24 Hours A Day 1-800-892-0099. For All Other Information Call 1-800-6-VALENT

EPA Registration No. 73049-15  
EPA Establishment No.

Valent BioSciences Corporation 870 Technology Way  
Libertyville, IL 60048

**PROGIBB® 4%**  
**PLANT GROWTH REGULATOR SOLUTION**  
**FOR AGRICULTURAL USE**  
**[SUB-LABEL I]**



Active Ingredient:	<u>% Content</u>	
Gibberellic Acid.....	4.0%	w/w
Other Ingredients.....	96.0%	w/w
Total.....	100.0%	w/w

ProGibb 4% Plant Growth Regulator Solution contains approximately 1.0 gram active ingredient per fluid ounce of formulated product.

**KEEP OUT OF REACH OF CHILDREN**

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For MEDICAL and TRANSPORT Emergencies ONLY Call 24 Hours A Day 1-800-892-0099. For All Other Information Call 1-800-6-VALENT

EPA Registration No.73049-15

EPA Establishment No.

Valent BioSciences Corporation

870 Technology Way, Libertyville, IL 60048

Net Contents: \_\_\_\_\_

Lot Number: \_\_\_\_\_

This container will treat \_\_\_\_\_acre at the maximum use rate, as indicated for use on\_\_\_\_\_.

<b>FIRST AID</b>	
If in eyes	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
If swallowed	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
If inhaled	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
If on skin or clothing	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b>	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies, you may also call toll-free 1-800-892-0099 for treatment information.</p>	

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**WARNING**

Causes substantial but temporary eye injury. Harmful if inhaled or absorbed through skin. Do not get in eyes or on clothing. Avoid breathing vapor or spray mist, and avoid contact with skin. Wash thoroughly with water and soap after handling. Remove and wash contaminated clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category C on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long sleeved shirt
- Long pants
- Chemical resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, and viton
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- User should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

For Terrestrial Uses. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

**PHYSICAL OR CHEMICAL HAZARDS**

**FLAMMABLE!** Keep away from heat and open flame.

## **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

### **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

**EXCEPTION:** If the product is soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, and viton
- Shoes plus socks
- Protective eyewear

## **GENERAL USE INSTRUCTIONS**

Use only as directed. Read the label thoroughly and understand it before making applications. Keep out of reach of children.

Do not apply this product through any type of irrigation system, unless otherwise permitted on the label.

### **Application Instructions:**

ProGibb 4% Plant Growth Regulator Solution (Hereafter referred to as ProGibb 4%) contains gibberellic acid, which is an extremely potent plant growth regulator; when applying plant growth regulators, deviations from the label directions in the rates, timings, water volumes, or the adoption of untested spray mixes, results in undesirable effects. Always consult the Valent agricultural specialist in your area for the spray regimen best suited to your conditions.

- Do not apply to plants under pest, nutritional, or water stress.
- When a range of rates is indicated, use the concentration and spray volume directed locally by the Valent agricultural specialist.
- For optimum effectiveness, thorough spray coverage must be achieved; all parts of the plant or crop must receive the spray or desired results will not occur. Prepare solution concentrations by mixing the required amount of product with water in a clean, empty spray tank. Dispose of any unused spray material at the end of each day following local, state or federal law.
- For most efficacious results, use water with a pH of 4.0 - 8.5. Use a buffer for water with pH above or below this range.
- ProGibb 4% applications made under slow drying conditions (cool to warm temperatures, medium to high relative humidity, and no wind) will increase absorption by the plant, thus optimizing effectiveness. Night time applications are encouraged when day time conditions are not conducive to slow drying conditions.
- Rain fastness: Re-apply ProGibb 4% if significant rain occurs within 2 hours of application.
- Compatibility: When considering tank mixing with other products, use the following compatibility jar test before mixing a whole tank.
  - Start with a clear glass or plastic quart jar. Add water from the same water source that will be used for the larger tank mix. Add the pesticides in correct proportions. Mix thoroughly and let stand for a minimum 15 minutes. Heat, separation, gelling are all signs of incompatibility. Before using any mixes that pass the jar tests for compatibility, it is imperative to test the mixture on a designated area as it may result either in phytotoxicity or ineffectiveness. For further information, consult your local Valent representative.
- Do not apply using ULV application methods. For aerial applications spray volumes must be greater than 2 gallons per acre (10 gallons per acre for tree crops).
- No preharvest interval is required for this product.

## SPRAY INSTRUCTIONS FOR CROP CATEGORIES

- **GRAPE**

For all grapes, application by ground sprayer provides the best coverage. Apply as a concentrate or dilute spray in sufficient water volume to ensure thorough wetting. It is important to wet all flower clusters or berries thoroughly. For cultivar specific spray rates and timings, see accompanying tables.

<b>SEEDLESS TABLE GRAPE</b>	
<b>CLUSTER STRETCH SPRAYS</b>	
<b>OBJECTIVE/BENEFIT</b>	<b>APPLICATION TIMING</b>
For cluster elongation and looser cluster forms. To reduce costs of thinning, allow better air circulation to aid in the control of bunch rot, and increase light penetration to aid in sugar development.	Make 1-3 applications before bloom when flower clusters are 2 - 7 inches long.
<b>CROP/CULTIVAR</b>	<b>RATE (g a.i. /acre)</b>
Perlette Seedless	8-24
Flame Seedless	8-24
Thompson Seedless	8-24
Raisin	8-24
Other Seedless Grapes	No data is available at this time.

<b>SEEDLESS TABLE GRAPE</b>	
<b>BERRY THINNING SPRAYS</b>	
<b>OBJECTIVE/BENEFIT</b>	<b>APPLICATION TIMING</b>
For decreased berry set, reduced hand-thinning costs, and hastened maturity.	Make 1-4 applications during bloom. Only 1-2 applications for “Other Seedless Grape”. When the bloom period is extended, make subsequent sprays 1 - 7 days after the first application
<b>CROP/CULTIVAR</b>	<b>RATE (g a.i. /acre)</b>
Perlette Seedless	No data is available for this variety/timing at this time.
Flame Seedless	3-16
Thompson Seedless	8-20
Raisin	3-12
Other Seedless Grapes	0.5-12
<p>NOTE:</p> <ul style="list-style-type: none"> <li>- Higher amounts or multiple applications have sometimes resulted in an excess of shot berries or over-thinning, especially in young vines or vines with high vigor.</li> <li>- For “Other Seedless Grapes” use caution as some of the new cultivars are very responsive and are known to over-thin easily. Consult a Valent representative or local specialist before thinning unfamiliar cultivars.</li> </ul>	

<b>SEEDLESS TABLE GRAPE</b>	
<b>BUMP SPRAY</b>	
<b>Thompson Seedless</b>	
<b>OBJECTIVE/BENEFIT</b>	<b>APPLICATION/TIMING/RATE</b>
To help initiate the beginning of the berry growth period.	Make one application of 16-24 g a.i. /acre during the period between the last thinning spray and the first sizing spray.

<b>SEEDLESS TABLE GRAPE</b>		
<b>BERRY SIZING SPRAYS</b>		
<b>OBJECTIVE/BENEFIT</b>	<b>APPLICATION/TIMING</b>	
For larger berries and larger clusters when used in conjunction with established girdling and thinning practices	Make 1-4 applications beginning when the average berry size reaches "target" diameter (See below). Timing of the subsequent sprays will be dictated by experience in the vineyard and temperatures occurring between sprays. Sprays made after 15-20 days from the first sizing spray are less effective.	
<b>CROP/CULTIVAR</b>	<b>Target Berry Diameter *</b>	<b>RATE (g a.i. /acre)</b>
Perlette Seedless	4-5 mm	32-128
Flame Seedless	6-9 mm	20-128
Thompson Seedless	3-5 mm	32-128
Raisin	3-5 mm	4-20
Other Seedless Grapes	3-14 mm	8-60
*Target average berry diameter for the first application		
<b>NOTE:</b>		
<ul style="list-style-type: none"> <li>• In some growing regions and for some cultivars, high amounts of gibberellic acid have occasionally been observed to: <ul style="list-style-type: none"> <li>- reduce fruitfulness (cluster counts) the following year,</li> <li>- delay berry skin color development, sugars accumulation and overall maturation.</li> </ul> </li> <li>• Consult a Valent representative or local specialist before sizing unfamiliar cultivars.</li> </ul>		

<b>BERRY SIZING CLUSTER DIP - SEEDLESS TABLE GRAPE</b>		
<b>OBJECTIVE/BENEFIT</b>	<b>APPLICATION TIMING</b>	
To increase berry size.	Apply 20 - 50 ppm GA3 solution as a dip or direct spray to the cluster when berries reach 12-15 mm.	
<b>CROP/ CULTIVAR</b>	<b>Rate Per 5 Gallons Treatment Solution</b>	
	<b>PPM AI</b>	<b>Ounces Product</b>
Seedless Grapes	20 - 50	1.0 – 2.5
Note: To prepare dip solution, add 1.0 – 2.5 ounces ProGibb 4% for every 5 gallons of solution needed. Consult the Valent representative or local specialist before sizing cultivars with which there is no familiarity.		

<b>SEEDED GRAPES</b>			
<b>BERRY SIZING SPRAYS</b>			
<b>OBJECTIVE/BENEFIT</b>		<b>APPLICATION TIMING</b>	
To increase berry size in listed cultivars; and also to reduce berry shrivel in Emperor.		Make one application during the indicated berry diameter range. Make the application as a whole vine spray, or as a spray or dip directly to the cluster.	
<b>CROP/CULTIVAR</b>	<b>Berry Diameter (mm)*</b>	<b>Whole vine spray. Rate a.i. /acre</b>	<b>Direct spray to the cluster only or dip the clusters. Rate in ppm's of a.i.</b>
Emperor	12-16	20	40-50
Red Globe	12-18	20	40-50
Calmeria	12-16	20	40-50
Christmas Rose	12-16	20	40-50
Rogue	12-16	20	40-50
Queens	12-15	20	40-50
Other varieties	12-15	-	40-50

\* Predominant average berry diameter for this application.

**NOTE:**

- The whole vine application has sometimes reduced fruitfulness (cluster counts) the following year.
- High amounts of gibberellic acid have occasionally delayed berry skin color development, sugars accumulation and overall maturation.
- Consult a Valent representative or local specialist before sizing unfamiliar cultivars.

<b>OBJECTIVE/BENEFIT</b>	<b>APPLICATION TIMING</b>
To increase berry size	Make 1 application 3-5 days after full bloom, but before shatter begins.
<b>CROP/CULTIVAR</b>	<b>RATE (g a.i. /acre)</b>
Black Corinth (Zante Currant)	1-12

## WINE GRAPE

OBJECTIVE/BENEFIT	APPLICATION TIMING
<p>To increase cluster length and improve air circulation and light penetration within the cluster. Under certain conditions this application is known to help reduce the incidence of bunch rot and sour rot.</p> <p>ALWAYS consult the Valent representative or the local agricultural specialist before making this application if there is no prior experience with this application.</p>	<p>Make a single spray. Apply when the clusters found in the dominant shoots arising from buds on count spurs are starting to elongate and show separation of the uppermost flower groups. This timing usually coincides with average cluster length of 3-4 inches (1-5 inch overall cluster length range). For each cultivar, follow the rate directions given on the table below. Use 100 gallons of water per acre.</p>
CROP/CULTIVAR	RATE (g a.i. /acre)
Palomino Sauvignon Blanc Tinta Madeira	0.4-1
Aleatico Carignane Chardonney Chenin Blanc French Colombard Pinot Noir Valdepenas	1-2
Barbera Petite Sirah Zinfandel	2-4
Green Hungarian	4-8
Grenache Alicante	8
Salvadore	8-16
<p>NOTE:</p> <ul style="list-style-type: none"> <li>• DO NOT make this application less than 3 weeks before anticipated full bloom.</li> <li>• This application will most likely cause some reduction in yield of seeded wine grape cultivars. This reduction in yield results from: a) increase in shot berries in the year of application; b) reduction in fruitfulness (cluster counts) in the first and second year following the application.</li> </ul>	

• **CITRUS**

For citrus, apply in sprays of sufficient water volumes to ensure thorough fruit wetting. In most cases, this application will cause some drop of older mature leaves; this drop of older leaves is inconsequential. However, application to trees of low vigor or under stress (pest, nutritional, or water, etc) has sometimes caused severe leaf and/or fruit drop. Do not apply in white wash sprays in which lime or other caustic material has produced a high pH in the spray tank. Applications of copper fungicides and/or oils within 3 weeks (before or after) the ProGibb 4% application has been known to result in significant leaf drop and fruit drop.

<b>CITRUS: FIELD APPLICATIONS</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
Navel Orange	To delay rind aging, reduce physiological disorders (e.g., rind staining, water spotting, sticky or tacky surface, puffy rind and rupture under pressure), and produce a more orderly harvesting pattern.	16-48	Make 1 or 2 applications as a concentrate or dilute spray.  1) Early application: spray approximately 2 weeks prior to color break (typically August – November). This timing causes the greatest delay in rind aging and produces the firmest rind possible. AND/OR 2) Late spray: 1 application after marketable color (typically October – December). This late spray has been known to cause re-greening.
Valencia Orange (For California and Arizona use only)	To reduce rind creasing and to delay rind aging and softening	40-80	Make a single application as a concentrate or dilute spray in August - October to target crop of young fruit.
NOTE:			
<ul style="list-style-type: none"> <li>• In groves that will be harvested early do not apply the early spray as fruit coloring will be delayed. Do not apply from January through July, as production has occasionally been observed to be reduced the following year.</li> <li>• Slower color development is to be expected in the target crop. Increased re-greening of mature fruit has been observed to occur. After marketable color is achieved, treatment effects are possibly dissipated the longer treated fruit remain on the tree.</li> </ul>			
All Round Oranges (For Florida use only)	To delay aging and softening of the rind, and to reduce creasing and puffiness.	20-60	Make a single application in August - October to trees with a target crop of young fruit. The addition of pure organo-silicone type surfactant at 0.05% (6 fl. Oz. In 100 gallons) has been shown to be beneficial.

<b>CITRUS: FIELD APPLICATIONS (con't)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
Lemon/Lime	To decrease the amount of small ripe fruit and produce a more desirable production pattern relative to market demand.	10 – 32	Make a single application when target crop is ½ to full size, but still green.
NOTE: <ul style="list-style-type: none"> <li>When applied 2 years in a row, an even larger difference in harvest pattern and maturity has been reported</li> </ul>			
Tangerine Hybrids (Orlando, Robinson, Minneola, Sunburst, and others)	To delay disorders associated with rind aging, puffiness, and softening, and to increase peel strength, of tangerine hybrids	20 – 40	Make 1 spray application 2 weeks prior to color break. Apply as a dilute spray.
NOTE: <ul style="list-style-type: none"> <li>Do not apply if early harvest is planned. Do not apply after coloring as pre-harvest rind staining is possible. Application during coloring has been observed to result in variation in rind color development.</li> </ul>			
Grapefruit (Not for use in California)	To delay disorders associated with rind aging (e.g., puffiness, softening, and orange coloration), prevent preharvest drop of mature fruit, increase peel strength, reduce water loss during storage, and produce a more orderly harvesting pattern.	16 – 48	Make 1 or 2 dilute spray applications in sufficient volume to ensure coverage. Do not exceed 20 ppm a.i. in spray solution.  EARLY: Make application 2 weeks prior to color break. Apply as a dilute spray (AUG-SEP).  AND/OR LATE: Make application after marketable color has developed (OCT-DEC).
NOTE: <ul style="list-style-type: none"> <li>Do not spray groves that are to be harvested early since fruit coloring will be delayed. Treated fruit has been known to re-green if allowed to remain on the tree for extended periods. Application made after December, or when trees begin to break dormancy, has been observed to adversely affect the new crop. Do not use concentrate sprays. Results have been known to vary from season to season depending on environmental conditions. The delay in rind aging is greatest when spray is applied before color change. This spray timing produces the firmest rind possible.</li> </ul>			

<b>CITRUS: FIELD APPLICATIONS (con't)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
Star Ruby Grapefruit (Not for use in California)	To reduce early-season small fruit drop of Star Ruby Variety thereby increasing yields.	25-35	Make a single dilute application during the bloom period.
NOTE: <ul style="list-style-type: none"> <li>Results vary from season to season depending on environmental conditions. Maintain a well-balanced fertilization and watering program.</li> </ul>			
Tangerine Hybrids (Orlando, Robinson, Minneola, Sunburst, and others) (Not for use in California)	To increase fruit set and yield. The number of applications depends on desired fruit set.	8 – 30	Make 1-2 applications during the bloom period. Apply as a dilute spray.
NOTE: <ul style="list-style-type: none"> <li>Fruit size has been known to be reduced and color development slightly retarded. A slight increase in mature leaf drop occurs sometimes in trees under stress.</li> </ul>			
Navel, Valencia and Ambersweet Orange (For Florida use only)	To enhance fruit set and yield.	15-25	Make a single dilute spray between mid-December and late January using sufficient spray volume for adequate coverage of tree canopy
Grapefruit (Not for use in California)	To enhance fruit set, size and yield	15-25	Make a single application in December - January. Apply in 125-175 gallons of water per acre with a pure organo-silicone type surfactant at 0.05% (6 fl. oz/100 gallons).

<b>CITRUS: CLEMENTINE MANDARIN</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE</b>	<b>APPLICATION TIMING</b>
Clementine Mandarin (Limit of 1-2 full applications in California)	To increase fruit set and yield	1-8 g a.i.per 100 gallons of spray volume	Make 1-4 applications from early bloom up to 4 weeks after petal fall. Allow a minimum of 3 days between sprays. Use a dilute spray with sufficient spray volume for adequate coverage of tree canopy.
<p>NOTE: The number of applications depends upon amount of desired fruit set. Generally, more fruit will be set by 2 applications, earlier applications, higher rates, and climactic conditions more favorable to set. Differences in the crop strain have been observed to interact with the above factors to affect the degree of fruit set achieved. Reductions in final fruit size have on occasion occurred as a result of excessive fruit set.</p>			

<b>CITRUS – INCREASE JUICE YIELD</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>USE RATE/ACRE</b>	<b>APPLICATION TIMING</b>
Processing oranges (Not for use in California)	To increase juice extraction yield in late-harvested processing oranges.	20 GRAMS A.I	Make a single application at fruit color break in sufficient volume to ensure complete coverage of the fruits.

• **FRUIT CROPS**

<b>FRUIT CROPS</b>			
<b>CROP/CULTIVAR</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE</b>	<b>APPLICATION TIMING</b>
Banana	To stimulate plant growth, and to overcome the effects of stress caused by insect, disease or adverse weather. These applications have been observed to improve fruit size and quality and overall yield.	<u>Aerial spray</u> : Apply 6 to 20 g a.i. /acre per spray. Use sufficient water volume to achieve adequate coverage of the canopy	Make applications every 3-4 weeks throughout the year. Use higher rates prior to, and during the periods of intense stress. It is permissible to tank-mix with the standard pesticide treatments applied by air.
		<u>Ground spray</u> : Apply 6 to 20 g a.i. /acre per spray. Use sufficient water volume to achieve adequate coverage of the canopy.	Direct applications to the daughter plants. Make first application when the daughter plant is selected. Make applications every 3-4 weeks throughout the year as needed. Use higher rates prior to, and during the periods of intense stress. It is permissible to tank- mix the product with pesticides.
	To stimulate early growth in new plantations, increase plant vigor and accelerate the time to flowering.	Apply 2-16 g a.i. /acre per spray. Use sufficient water volume to achieve adequate coverage of the canopy	Make the first application a few days after transplanting, when plants are established. Repeat applications at 3-4 weeks intervals.

<b>FRUIT CROPS (con't)</b>			
<b>CROP/CULTIVAR</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE</b>	<b>APPLICATION TIMING</b>
Banana	Application by injection into the pseudostem  1. To promote plant growth:  2. To promote healthy root system	Apply 5 ml per plant of a 640-1280 ppm solution.  Apply 50 – 400 ml per plant of a 250-1000 ppm solution	NOTE: Make sure that the needle tip does not touch the growing tissue at the center of the pseudostem.  Apply to plants over 5 feet tall on a monthly basis until flowering occurs. Make 1 application per generation
	To stimulate bunch fruit development, improving fruit size and quality, and overall yield.	Apply a solution of 200 – 500 ppm. Use sufficient water volume to achieve adequate coverage of bunch and fruit.	Make 1-2 applications prior to bunch bagging program or approximately 7-14 days after floral bunch emergence. It is permissible to tank-mix with the standard pesticide treatments
Pineapple	To improve fruit size.	Apply 125- 250 g a.i. /acre per application.	Apply after flowering. Make 2 applications at 3-5 weeks intervals. Direct sprays to the fruit. Use sufficient water to achieve adequate coverage.
	To improve uniformity of fruit maturity and enhance harvest efficiency.	Apply 12-24 g a.i. /acre per application.	Make the first application a few days after planting when plants are established. Repeat applications at 3-4 weeks intervals.

FRUIT CROPS (con't)			
CROP/CULTIVAR	OBJECTIVE/BENEFIT	RATE (g a.i. /acre)	APPLICATION TIMING
Blueberry (Not for use in California)	To improve fruit set.	40-80	Make a single application of 80 g a.i. in 40 - 100 gallons of water/acre. Apply at full bloom (when 75% of the flowers are fully open).
<u>Highbush:</u> Coville, Jersey, Stanley, Earliblue, Weymouth, Walcott, Berkeley, Blueray, Bluecrop, 1316A, Concord, and others			OR Make 2 applications at 40 g a.i./acre in 40 - 100 gallons of water. Make the first application at full bloom, and the second one within 10-14 days of the first one. To increase size of "shot" berries in Weymouth, delay the application up to 2 weeks after bloom.
Blueberry: (Not for use in California) <u>Rabbiteye:</u> Aliceblue, Beckyblue, Bonita, Brightwell, Climax, Delite, Tiftblue, Woodward, and others.	To improve fruit set.	40-80	Make a single application of 40 - 80 g a.i./acre in 40 - 100 gallons of water per acre when most of the flowers are elongated but not yet open (bloom Stage 5). OR Make 2 - 4 applications 10 - 14 days apart starting at bloom Stage 5. Spray 20 - 40 g a.i. /acre in 40 - 100 gallons of water per application.

<b>FRUIT CROPS (con't)</b>			
<b>CROP/CULTIVAR</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
<p>NOTE:</p> <ul style="list-style-type: none"> <li>• Color development and harvest date have occasionally been slightly delayed.</li> <li>• Use higher rates with heavier crop loads.</li> </ul>			
Sweet Cherry (Not for use in California)	To produce larger, brighter colored, firmer fruit	16-48	<p>Make 1 - 2 applications when fruit is translucent green to straw colored.</p> <p>If making 2 applications, apply 1/3 - 1/2 of the total desired amount when the majority of the fruit is translucent green. Apply the remaining material 3-7 days later, when the majority of the fruit is straw colored.</p>
<p>NOTE:</p> <ul style="list-style-type: none"> <li>• Do not exceed 48 g a.i. /acre per season</li> <li>• 2 applications should be used when crop maturity is uneven and a single spray will not be effective.</li> <li>• Color development and harvest date have occasionally been slightly delayed</li> <li>• Use higher rates with heavier crop loads.</li> </ul>			
Sour Cherry (Not for use in California)	To maintain and extend high fruiting capacity of sour cherry trees by promoting spur formation and reducing the occurrence of "blind" nodes. Spur formation is apparent the year after application. Therefore, changes in shoot, spur, and flower production will not be evident until 2 - 3 years after program initiation. Applications must be applied annually to ensure spur development and subsequent yield improvement year after year.	4-18	<p>Apply 1 spray 14 - 28 days after bloom. Optimum timing is defined as that stage when 3 - 5 terminal leaves have fully expanded, or, at least 1 - 3 inches of terminal shoot extension has occurred. Use 4 - 18 g a.i. /acre, depending on tree age and vigor (See Table below). Apply as a dilute spray in sufficient water to ensure thorough wetting, or as a concentrate spray ensuring uniform coverage.</p>
<p>NOTE:</p> <ul style="list-style-type: none"> <li>• Rates are based on expected normal tree vigor at various ages. Adjust rate according to tree vigor. If trees are vigorous, use lowest indicated rates. Use lowest rates on trees that have been heavily pruned or hedged. Use higher rates for trees low in vigor and weak in shoot and spur production. Excessive application rates will increase vegetative growth at the expense of fruit production the following year. Applications will not improve growth of trees under stress conditions, such as nutritional, moisture, or pest. Best results will be obtained when combined with good cultural practices.</li> </ul>			

**APPLICATION RATES (GRAMS A.I./ACRE)  
FOR TART CHERRY TREES BY AGE**

Tree Age (years)	Rate (g a.i. /acre)
6-10	4-6
11-15	8-10
16-20	10-14
20 + years	14-18

<b>FRUIT CROPS (con't)</b>			
CROP/VARIETY	OBJECTIVE/BENEFIT	RATE (g a.i. /acre)	APPLICATION TIMING
Stone Fruit Group	To increase fruit firmness and improve fruit quality in the season of application	16-32	Apply as a single spray 1 - 4 weeks prior to the beginning of the harvest period. Use sufficient water to achieve complete coverage of fruits and foliage.
NOTE: <ul style="list-style-type: none"> <li>This application has occasionally caused reduction in flower counts the year following the application, particularly if it is made during the months of May through July.</li> </ul>			
Italian Prune (Not for use in California)	To reduce internal browning, improve quality, and increase size.	16-48	Make a single application 4 - 5 weeks before expected harvest. Apply in sufficient water volume to ensure thorough wetting.
NOTE: <ul style="list-style-type: none"> <li>Color development and harvest have occasionally been slightly delayed. Observation of reduced bloom the following season is occasionally seen.</li> </ul>			

<b>TEMPERATE FRUIT CROPS</b>			
CROP/ VARIETY	OBJECTIVE/ BENEFIT	USE RATE/ ACRE	APPLICATION TIMING
Pecan (Not for use in Arizona and California)	To extend leaf retention and maintain green foliage.	<b>10 GRAMS A.I</b>	Make 1-4 applications of 10 g a.i. beginning in July and continuously through October as needed.
Note: <ul style="list-style-type: none"> <li>Use sufficient water to achieve complete coverage. In most cases 100 gallons per acre has been shown to be effective.</li> <li>Do not make more than 1 application of ProGibb 4% in July. Using more than 1 application in July may result in reduced return bloom.</li> <li>ProGibb 4 % may be tank mixed with Belay<sup>®</sup> Insecticide.</li> </ul>			

<b>NON BEARING STONE FRUIT TREES</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
Non Bearing Stone Fruit (Not for use in California)	To reduce flowering and fruiting in young stone fruit trees in order to minimize the competitive effect of early fruiting on tree development.	20 – 80	Make a single application during the period of flower bud initiation for the following year. Consult with the Valent representative or local horticulturist for timings and rates for specific cultivars in your area. Use sufficient water to achieve good coverage of the canopy.
<p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>Do not spray trees in the first year. Treat in the second season for reduction of flowering in the third season, and again in the third season if flower reduction and fruiting is desired in the fourth season. Treat only trees that are in good physiological condition. Discontinue treatment the year before desired harvest.</li> </ul>			

<b>FRUIT CROPS (Con't)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
Strawberry (Not for use in California)	To increase runner production of mother plants.	15-25	Make a single application to mother plants 10 – 30 days after planting. Efficacy is best when plants have 1-6 leaves at spraying. Apply 100 gallons spray/acre to point of run-off.
<p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>Not for use on fruiting plants. Treatments have not been as effective on plantings set out after mid-May.</li> <li>Response varies with cultivar and location. Consult your Valent representative or local horticulturist for specific indications.</li> </ul>			
Cranberry (Not for use in California)	To reduce or completely eliminate the crop in the year of application	10-50	Make a single application at early bloom (2-5% scatter bloom). Use sufficient water to ensure thorough coverage.
<p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>Application made later than indicated have been known to result in no effect or actually results in increased fruit set (opposite effect).</li> <li>Responses will vary with cultivar, age of the bog and location. Consult the Valent representative or local specialist for specific information.</li> </ul>			

<b>TROPICAL CROPS – FIELD USES</b>			
<b>CROP/ VARIETY</b>	<b>OBJECTIVE/ BENEFIT</b>	<b>USE RATE / ACRE</b>	<b>APPLICATION TIMING</b>
Sugarcane (Not for use in California)	To maintain yields in older plantings, increase bio-mass and stimulate growth before harvest of cane in older production fields (>3 years)	1.0-2.0 g a.i /acre	Apply at 1 <sup>st</sup> to 5 <sup>th</sup> internode stage to ratoon crop in at least 20 gal/A. Addition of non- ionic surfactant may increase activity

• **VEGETABLE CROPS**

<b>VEGETABLE CROPS</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/ BENEFIT</b>	<b>RATE (g a.i./acre)</b>	<b>APPLICATION TIMING</b>
Artichoke	To accelerate maturity and shift harvest to an earlier date	10 – 20	For perennials: apply 1-3 applications at bud initiation stage. For annuals: apply 1-4 applications at 2-week intervals, beginning at the fourth true leaf. Use sufficient water volume to ensure thorough wetting of the entire plant (leaves, stems and buds).
Carrots, Fresh and Processing	To delay leaf senescence. Maintaining vigorous foliage has been shown to help reduce the incidence of infection by <i>Alternaria dauci</i> .	1-6	Make the first application 4-6 weeks after emergence using commercial ground or aerial equipment with spray concentrations of 20-30 ppm. In severe disease situations or cool weather a second spray 14 days later is sometimes required to achieve the desired amount of foliar recovery. Do not apply more than twice per crop.
NOTE: • Dilutions of greater concentration can increase the risk of excessive top growth, particularly with a second application.			
Celery	To increase plant height and yield and to overcome stress due to cold weather conditions or saline soils, and obtain earlier maturity.	2.5 – 10	Make a single application 1-4 weeks prior to harvest. Use 25-50 gallons of water per acre by ground application or 5-10 gallons of water per acre for aerial application (except in California). Use lower concentrations if applying 3-4 weeks before harvest and higher concentrations within 1-2 weeks before harvest.
NOTE: • Do not apply by air in California. Do not apply earlier than 4 weeks before harvest as bolting has been known to occur.			

<b>VEGETABLE CROPS (con't)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
Cucumber (Not for use in California)	To stimulate fruit set during periods of cool temperatures.	1-4	Make 1 application prior to bloom followed by 2 additional applications at intervals of 10-14 days. It is acceptable to use up to 4 applications. Use sufficient water volume for thorough coverage of exposed foliage.
NOTE: <ul style="list-style-type: none"> <li>For maximum benefits, vines must be in good condition, except for reduced rate of growth due to cool temperatures.</li> </ul>			
Lettuce for Seed	To obtain uniform bolting and increase seed production	1-4	Apply 1 - 4 applications at 2-week intervals, beginning at the fourth true leaf. Use sufficient water volume to ensure thorough wetting.
Melon (Not for use in California)	To stimulate fruit set during periods of cool temperatures	1-4	Make 1 application prior to bloom followed by 2 additional applications at intervals of 10-14 days on cantaloupes and watermelons.
NOTE: <ul style="list-style-type: none"> <li>For maximum benefits, vines must be in good condition, except for reduced rate of growth due to cool temperatures.</li> </ul>			

<b>VEGETABLE CROPS (con't)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i./acre)</b>	<b>APPLICATION TIMING</b>
Pepper (Not for use in California)	To promote plant growth	1-3	Apply 1-2 sprays in 25-50 gallons of water per acre at 2-week intervals. Begin sprays 2 weeks after transplanting.
NOTE: <ul style="list-style-type: none"> <li>This use is best for areas with short growing seasons, or when low temperatures slow plant growth.</li> </ul>			
Pepper (Not for use in California)	To increase fruit set and promote fruit growth	1-3	Apply 1-2 sprays in 25-50 gallons of water per acre at weekly intervals during the flowering period.
NOTE: <ul style="list-style-type: none"> <li>The high rate is most efficacious for areas and/or varieties with pollination and/or fruit set problems.</li> </ul>			
Pepper (Not for use in California)	To increase fruit size	1-3	Apply in 25-50 gallons of water per acre at the beginning of the picking period.
NOTE: <ul style="list-style-type: none"> <li>The high rate is best for plants with heavy fruit loads.</li> </ul>			
Potato seed	To stimulate uniform sprouting to aid in maximum production, more uniform development, fewer late maturing plants, and to break dormancy of newly harvested potatoes that have not had a full rest period.	0.2- 0.4 grams in 100 gallons	Dip whole or cut seed pieces in a solution containing 0.2-0.4 g a.i.in 100 gallons of water prior to planting.
NOTE: <ul style="list-style-type: none"> <li>Under high soil temperatures use the minimum concentration for dormant seed. Do not treat rested seed pieces.</li> </ul>			

<b>VEGETABLES (Con't)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
Rhubarb	To break dormancy on plants receiving insufficient chilling and to increase marketable yield of forced rhubarb	10 – 20 (grams in 10 gallons)	1) When the rest period is not completely broken, make a single application of 2 fl oz (60 ml) of a solution containing 20 g a.i. in 10 gallons of water to each cleaned crown. 2) When the rest period is broken by cold weather, apply 2 fl oz (60 ml) of a solution containing 10 g a.i. in 10 gallons of water to each cleaned crown.
<p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>Keep forcing house temperatures at 40 – 50°F for 24 hours after application. If house is warmer than 50°F, cover crowns with plastic. Temperatures above 50°F lower yields and cause poor stalk color.</li> </ul>			
Spinach, Mustard greens, Collard greens and Turnip greens. (Not for use in California)	To facilitate harvest, increase yield and improve quality of fall and over-winter crops.	4-10	Apply a single spray 10-18 days before each anticipated harvest on fall or over-winter crops, ideally when daytime temperatures are 40° F-70° F and during early morning hours when dew is present on crop. Make applications in 10-50 gallons of water per acre by ground sprayer or in a minimum of 5-10 gallons of water per acre by air. When applied to promote growth of second cutting, wait until some regrowth has started before spraying. Maximum benefit is obtained when below normal temperatures prevail following application and growth would be otherwise slowed in untreated crops.
<p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>Since the promotion of bolting has been known to occur, do not apply after the mid-winter period or if temperatures are expected to exceed 75° F within several days of application. Do not apply on spring plantings.</li> </ul>			

• **WATERCRESS**

<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
Watercress	1) To enhance growth in adverse weather conditions; 2) To help plants resume growth after insect and disease attacks; 3) To increase root free stem length during low light/short day conditions.	15-25	Make 1 or 2 applications per acre per crop 3 - 7 days before harvest. Use 50-100 gallons of water per acre.

• **HOPS**

<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i./acre)</b>	<b>APPLICATION TIMING</b>
Hops: Seeded and seedless Fuggle hops and similar varieties adapted to the Northwestern states.	To increase fruit set and yield.	4 – 6	Make a single application in 100- 150 gallons of water per acre when vine growth is 5-8 feet in length.

• **RICE**

CROP/VARIETY	OBJECTIVE/ BENEFIT	RATE (g a.i. /acre)	APPLICATION TIMING
Rice	To promote early season plant vigor and more uniform seedling growth prior to permanent flood establishment.	1 - 3	Make 1-2 applications at the 1-2 and/or 4-5 leaf stages of growth.
Rice (Not for use in California)	To promote main culm and tiller panicle extension resulting in improved grain yield.	3 - 8	Make a single application between split-boot and 100% panicle heading.  Heading applications to the first crop also has been observed to accelerate re- growth of second crop rice.
Rice (Hybrid Seed Production) (Not for use in California)	To promote main culm and tiller panicle extension resulting in improved pollination and seed yield.	20 -100	Make 1-5 applications at regular intervals during the heading period to promote main culm and tiller panicle extension.
<p>Note: Timing and dosage are to be based upon environmental conditions, tank mix combinations with herbicides, and preferred permanent flood practice in relation to rice leaf stage. <b>Do not</b> apply when rice is subjected to drought stress conditions. Foliage occasionally and temporarily appears lighter green in color due to accelerated growth rates following ProGibb 4% application.</p>			
Rice (Not for use in California)	Promote yield enhancement of ratoon crop rice by increasing ratoon tiller growth and aiding ratoon stand establishment	4 – 7	Apply single application at post flowering through soft dough stage to primary rice crop to initiate enhanced growth of following ratoon crop.

- **COTTON:**

USE	OBJECTIVE/	RATE (fl oz /acre)	APPLICATION TIMING
On young cotton plants	Promote growth and increase seedling vigor	1 - 6 fl oz (30 to 180 ml)	In-furrow application to seed, or as a foliar application from the cotyledon leaf stage through the 7 leaf/node stage. Repeat applications as needed to a maximum of 3 applications. Applying more often than necessary to achieve the desired height results in excessive vegetative growth.
<p><b>Notes:</b>            Use higher rates (within the indicated range) when temperatures will likely average 75°F or less during the 14 days following application(s).</p> <p>Do not apply ProGibb 4% to cotton plants that are under drought stress. If the cotton plants are under continuous stress, delay the application of ProGibb 4% until the stress is alleviated and the plants are beginning to recover.</p> <p>Avoid drift or accidental application to other crops.</p> <p><b>Compatibility with Other Chemicals</b>            Data regarding the compatibility of ProGibb 4% with herbicides used in cotton are not available.</p>			

- **SOYBEAN:**

Crop	Objective	Use rate/acre	Application Timing
Soybean	To promote early season growth, seedling vigor and increased plant height allowing for improved harvest efficiency.	3 - 10 grams A.I.  3 - 10 fl oz product	Apply 1-2 applications as a foliar broadcast spray during growth stages V1- V4 (1-2 sets of unfolded trifoliolate leaves). If applying as a banded spray, reduce rates accordingly. Complete coverage of leaf tissue is essential. Make applications in 10-40 gal Water/A.

## CONVERSION TABLE

**ProGibb 4% contains approximately 1 gram of active ingredient per fluid ounce of product**

<b>Grams of active ingredient</b>	<b>Fluid Ounces of ProGibb 4%</b>
0.5	0.5 oz
1.0	1 oz.
2.0	2 oz
4.0	4 oz
5.0	5 oz
8.0	8 oz
10.0	10 oz
12.0	12 oz
16.0	16 oz
20.0	20 oz
25.0	25 oz
32.0	32 oz
40.0	40 oz
48.0	48 oz
50.0	50 oz

## CHEMIGATION

### DIRECTIONS FOR CHEMIGATION

Fill the supply tank with the desired amount of water. Then add the amount of ProGibb 4% required in order to achieve the final solution rate recommended for the specific crop to be treated. Agitate the mixture of ProGibb 4% frequently during the chemigation period to assure a uniform distribution throughout the system. Apply ProGibb 4% continuously for the duration of the water application but do not exceed recommended rates and volumes as outlined on the product label.

### CHEMIGATION PRECAUTIONS

Apply this product only through the following systems: Overhead

sprinklers such as impact, micro-sprinklers, or booms.

Do not apply this product through any other type of irrigation system. Crop injury or lack of effectiveness can result from non-uniform distribution of treated water. If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Prior to application ensure that the chemigation system meets the following requirements:

The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

In addition to the above use rates and recommendations, the following precautions must be observed when using this product in any type of irrigation system:

#### **CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS**

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year. Chemigation systems connected to public water systems must contain a functional, reduced pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water systems should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where the pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in a cool, dry place. Keep containers tightly closed when not in use. Keep away from heat and open flame.

**Pesticide Disposal:** To avoid wastes, use all material in this container by application according to label directions. If wastes can not be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinance.

**NOTICE TO USER:**

To the extent permitted by applicable law, seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

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**PROGIBB 4%PLANT GROWTH REGULATOR SOLUTION**

**[Alternate brand names: Progibb T&O Plant Growth Regulator Solution and Progibb TVO Plant Growth Regulator Solution]**

**FOR USE ON TURF, VEGETABLES AND ORNAMENTAL CROPS  
[SUB-LABEL II]**



Active Ingredient:	% Content
Gibberellic Acid.....	4.0% w/w
Other Ingredients.....	96.0% w/w
Total.....	100.0% w/w

ProGibb 4% Plant Growth Regulator Solution contains approximately 1.0 gram active ingredient per fluid ounce of formulated product.

**KEEP OUT OF REACH OF CHILDREN WARNING - AVISO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail).

For MEDICAL and TRANSPORT Emergencies ONLY Call 24 Hours A Day 1-800-892-0099. For All Other Information Call 1-800-6-VALENT or 1-866-476-7800

EPA Registration No. 73049-15

EPA Establishment No.

Valent BioSciences Corporation

870 Technology Way  
Libertyville, IL 60048

Net Contents: \_\_\_\_\_

Lot Number: \_\_\_\_\_

This container will treat \_\_\_\_\_ acre at the maximum use rate, as indicated for use on \_\_\_\_\_.

<b>FIRST AID</b>	
If in eyes	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
If swallowed	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
If inhaled	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
If on skin or clothing	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

#### **HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies, you may also call toll-free 1-800-892-0099 for treatment information.

### **PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING**

Causes substantial but temporary eye injury. Harmful if inhaled or absorbed through skin. Do not get in eyes or on clothing. Avoid breathing vapor or spray mist, and avoid contact with skin. Wash thoroughly with water and soap after handling. Remove and wash contaminated clothing before reuse.

#### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category C on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long sleeved shirt
- Long pants
- Chemical resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, and viton
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### **USERSAFETYRECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- User should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

For terrestrial uses. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

#### **PHYSICAL OR CHEMICAL HAZARDS**

**FLAMMABLE!** Keep away from heat and open flame.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, and viton
- Shoes plus socks
- Protective eyewear

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter without appropriate protective clothing until sprays have dried.

## **DIRECTIONS FOR USE ON ORNAMENTAL CROPS, CUT FLOWERS AND TURFGRASS**

### **PRODUCT INFORMATION**

ProGibb 4% Plant Growth Regulator (hereafter referred to as ProGibb 4%) is an extremely active plant growth regulator. Care must be used in measuring, diluting, and applying ProGibb 4%..

A foliar application of ProGibb 4% supplies plants with an additional source of the naturally occurring plant growth regulator gibberellin. Gibberellins are involved in numerous plant development processes. Adding gibberellic acid (GA3) promotes a number of desirable effects in floriculture crops including increased flower size, increased flower number, uniform flowering, increased stem elongation, and a decrease in time to flower. Additionally, gibberellin applications have been shown to reduce the minimum temperature required to initiate plant growth and will overcome bud and seed dormancy. In Bermuda grass turf, adding ProGibb 4% will initiate and/or maintain growth and prevent color change during periods of cold stress and will maintain and/or enhance regrowth during summer months.

### **GENERAL INSTRUCTIONS**

When applying plant growth regulators, deviations in rates, timings, or water volumes from the label directions has been known to result in undesirable effects.

For optimum effectiveness, thorough spray coverage must be achieved; only plant parts covered with spray solution will be affected. Plant parts not directly covered with ProGibb 4% will not respond to the application.

An effective dose of ProGibb 4% is strongly dependent on application volume. Variation in plant response is possible if a given rate is applied at different spray volumes. Uniformity of spray solution is equally important.

When applying foliar applications of ProGibb 4% spray plants to run-off. The actual spray application rate will vary depending on plant size and spacing density. A spray application rate which is effective for 6-inch potted plants spaced at a density of 1 pot per square foot is 2 quarts of finished spray solution per 100 square feet of bench area.

Differences in plant response to ProGibb 4% due to differences in plant surfaces, leaf orientation, and plant structure are possible. ProGibb 4% is most efficacious when applied during morning or late afternoon hours or when plants are not under environmental stress as extreme temperatures can influence plant response to ProGibb T&O.

### **DETERMINING OPTIMAL APPLICATION RATES**

The rates on this label are ranges and an optimum ProGibb 4% rate will depend on desired expectations as well as physical and environmental factors. Specific growing practices such as watering, potting media, fertilization, temperature, and light conditions will affect plant responses to a given ProGibb 4% rate.

Results from ProGibb 4% applications are dependent upon timing, rate, frequency of application, and plant vigor at application. ProGibb 4% applications made under slow drying conditions (cool temperatures, low air movement and medium to high relative humidity) will increase absorption by the plant, thus optimizing effectiveness.

To determine optimum use rates, conduct trials on a small number of plants under actual use conditions using the lowest indicated rate. When a range of rates is indicated, use the lowest concentration directed until familiarity is gained.

## LIMITATIONS

- For optimum effectiveness, thorough spray coverage must be achieved; all parts of the plant or crop must receive the spray or desired results will not occur.
- Do not apply to plants under pest, nutritional, or water stress. ProGibb 4% will not correct or substitute for treatment of pest, nutrient, or water stresses.
- Do not apply after flower buds show color.
- Do not apply through any type of irrigation system.
- Avoid drift onto non-target species.
- Do not mix ProGibb 4% with pesticides, fertilizers, wetting agents, spreader stickers or other adjuvants.
- Over-application has the potential to result in accelerated plant growth/development.
- Do not apply ProGibb 4% to any food crop.
- Do not reuse soil from plants treated with ProGibb T&O.

## MIXING INSTRUCTIONS AND RATE CONVERSION TABLE

Apply with standard spray equipment set according to manufacturer's indications. ProGibb 4% mixes readily with water. For best results, have the water pH at 7.0 and always below 8.5.

**Foliar Applications:** Always make sure application equipment is thoroughly clean before mixing. When preparing ProGibb 4% for use as a foliar spray, fill tank to one half full. Add the amount of ProGibb 4% according to the rate conversion table below. Complete filling the tank. Dispose of any unused spray material at the end of each application following local, state or federal law.

**Rate Conversion Table\***

<b>ppm (parts per million) (GA<sub>3</sub>)</b>	<b>Milliliters (ml) of ProGibb 4% per liter of spray solution</b>	<b>Milliliters (ml) of ProGibb 4% per gallon of spray solution</b>	<b>Fl. oz. of ProGibb 4% per gallon of spray solution</b>
1	0.03	0.1	0.003
5	0.15	0.6	0.02
10	0.3	1.1	0.04
25	0.74	2.8	0.09
50	1.5	5.6	0.19
100	3.0	11.2	0.4
250	7.4	28.0	0.95
500	14.8	56	1.9
750	22.2	84	2.8
1,000	29.6	112	3.8

\*ProGibb 4% is a liquid. Each fluid ounce contains approximately 1.0 gram of active ingredient.

## ORNAMENTAL CROPS, CUT FLOWERS AND TURFGRASS

- The following use rates are based on results with common cultivars. Differences in responsiveness vary between cultivars, growing conditions, and cultural management systems. Therefore, prior to widespread usage, test a small number of plants from each cultivar under a specific set of growing and cultural management conditions to verify desired efficacy.
- ProGibb 4% is an extremely potent plant growth regulator. The general effects on floriculture crops are to increase plant size through increased stem elongation and leaf and petal expansion. If applied at an improper time, at excessive rates, or too frequently, plants have the potential to become long and spindly with weak stems.

• **SPRAY INSTRUCTIONS FOR ORNAMENTALS**

<b>AZALEA</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (ppm a.i.)</b>	<b>APPLICATION TIMING</b>
Azalea	<p><b>As a Partial Replacement of Cold Treatment to Break Flower Dormancy</b> Applications of ProGibb 4% have been shown to partially replace a cold treatment needed to break flower dormancy of azalea.</p>	250-500	<p>For three consecutive weeks apply a single foliar application. Begin applications only after plants have received 3 to 4 weeks of chilling. Have plants at Stage 5 of floral development (i.e., style elongated and open) when treatment is initiated. A representative spray schedule consist of applications made at 3, 10, and 17 days after four weeks of chilling. Flowers will not develop properly if applied prior to Stage 5.</p>
<p>Note:</p> <ul style="list-style-type: none"> <li>• Thorough spray coverage is essential for uniform flowering.</li> <li>• Do not apply after flower buds show color.</li> <li>• Cultivars such as 'Gloria', 'Prize', and 'Redwing', a single spray of 1,000 ppm after 4 weeks of chilling has proven effective in breaking dormancy</li> </ul>			
Azalea	<p><b>As a Complete Substitution of Cold Treatment to Break Flower Dormancy</b> Applications of ProGibb 4% have been shown to completely substitute for a cold treatment that is needed to break flower dormancy of azalea.</p>	1,000	<p>For four to six consecutive weeks apply a single foliar application of 1,000 ppm. Plants must be at Stage 5 of floral development (i.e., style elongated and open) before first spray is applied. Flowers will not develop properly if applied prior to Stage 5 of floral development.</p>
<p>Note:</p> <ul style="list-style-type: none"> <li>• Thorough spray coverage is essential for uniform flowering.</li> <li>• Do not apply after flower buds show color.</li> </ul>			

<b>AZALEA (con't)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (ppm a.i.)</b>	<b>APPLICATION TIMING</b>
Azalea	<b>To Inhibit Flower Bud Initiation During Vegetative Growth</b> Applications of ProGibb 4% have been shown to inhibit flower bud initiation during vegetative growth of azalea.	100-750	Apply a single foliar application of ProGibb 4% at 100 to 750 ppm beginning 2 to 3 weeks after each pinch. Continue applications on a weekly basis for 1 to 2 weeks after the first application.
Note: <ul style="list-style-type: none"> <li>Apply a maximum of three applications</li> </ul>			
<b>CALLA LILY</b>			
Calla Lily	<b>For increased flowering</b> Applications of ProGibb T&O have been shown to increase the number of flowers per rhizome or tuber in Calla Lilies.	500	Soak rhizome or tuber in ProGibb 4% at 500 ppm for 10 minutes prior to planting.
Note: <ul style="list-style-type: none"> <li>Some flower leaf or flower stretching has occasionally been seen on some cultivars. Reduce rates when this is noted. Changing soak time or concentration varies the response to ProGibb T&amp;O.</li> </ul>			
<b>CAMELLIA</b>			
Camellia	<b>For Substitution of Chilling Requirements and to Increase Bloom Size</b> Applications of ProGibb T&O have been shown to substitute for the chilling requirements and increase bloom size of camellia.	2.0% solution	Dilute ProGibb 4% in half by mixing equal volumes of product and water. Remove the vegetative bud immediately adjacent to or below the floral bud. Place a single drop of the prepared solution to the vegetative bud scar.
Note: <ul style="list-style-type: none"> <li>The addition of a deposition aid (such as carboxymethylcellulose) to thicken the solution will decrease run-off.</li> </ul>			



<b>GERANIUM</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (ppm a.i.)</b>	<b>APPLICATION TIMING</b>
<b>CUTTINGS</b>			
Geranium	<b>For increase in flower number and flower size.</b> Applications of ProGibb T&O have been shown to increase flower number and flower size of geranium cuttings.	1-5	Apply a single foliar application of 1 to 5 ppm when inflorescence first begins to show color. Direct spray at the developing inflorescence.
Note: <ul style="list-style-type: none"> <li>• Treatments prior to inflorescence showing color or concentrations higher than 5 ppm have occasionally caused peduncle stretching.</li> </ul>			
<b>SEEDLINGS</b>			
Geranium	<b>For flowering advancement</b> Applications of ProGibb 4% have been shown to advance flowering 10 to 21 days depending upon variety of geranium.	5-15	Apply a single foliar application of 5 to 15 ppm when first flower bud set is noted. Spray the entire plant to the point of run-off.
Note: <ul style="list-style-type: none"> <li>• Incorrect timing or concentrations above 15 ppm have caused plant stretching.</li> </ul>			
<b>TREE FORMS</b>			
Geranium	<b>For Tree Forms:</b> The following directions are for the production of the tree forms of common geranium cultivars by stem elongation.	250	For four consecutive weeks apply a single foliar application of 250 ppm. Spray the entire plant to the point of run-off.
Note: <ul style="list-style-type: none"> <li>• Treated plants occasionally require staking after application.</li> </ul>			

<b>HYDRANGEA</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (ppm a.i.)</b>	<b>APPLICATION TIMING</b>
Hydrangea	<b>For chilling substitution to break flower bud dormancy</b> Applications of ProGibb 4% have been shown to substitute for chilling requirements to break flower bud dormancy of hydrangea.	2-5	For one to four consecutive weeks apply a single foliar application of 2 to 5 ppm. Begin applications at the start of forcing. For best results, thoroughly cover all growing points containing flower buds.
Note: <ul style="list-style-type: none"> <li>Over-applications or concentrations higher than 5 ppm have resulted in stretched, spindly, and weakened stems.</li> </ul>			
<b>POMPOM CHRYSANTHEMUM</b>			
Pompom Chrysanthemum	<b>For Elongated Peduncles</b> Applications of ProGibb T&O have been shown to elongate peduncles of Pompom chrysanthemum.	25-60	Apply a single foliar application of 25 to 60 ppm 4 to 5 weeks after initiation of short days. Apply directing the spray solution towards the flower buds.
Note: Over-application or incorrect timing have caused stretched, spindly, and weakened stems.			
<b>CHRYSANTHEMUM STOCK PLANTS</b>			
Chrysanthemum Stock Plants	To elongate the cuttings prior to harvest	1-150	Use 125 – 150 gallons of water per acre. Repeat at 3-7 day intervals as needed.
<b>SPATHIPHYLLUM AND OTHER ARACEAE</b>			
Spathiphyllum	<b>To accelerate bloom and increase the number of flowers per plant</b> Applications of ProGibb T&O have been shown to increase flowering of <u>Spathiphyllum</u> .	150-250	Apply a single foliar application of 150 to 250 ppm approximately 9 to 12 weeks prior to expected date of sale. Spray to the point of run-off and thoroughly wet all growing points.
Note: <ul style="list-style-type: none"> <li>Some flower distortion or leaf stretching has been observed on cultivars such as ‘Petite’, ‘Starlight’, ‘Tasson’, and ‘Mauna Loa’. Reduce rates when this is noted. On other cultivars, first evaluate ProGibb 4% on a small number of plants <b>prior to</b> application of the product on a commercial basis.</li> </ul>			

**SPATHIPHYLLUM AND OTHER ARACEAE (con't)**

<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (ppm a.i.)</b>	<b>APPLICATION TIMING</b>
AGLAONEMA ANTHURIUM DIFFENBACHIA (Dumb Cane)	<b>To accelerate bloom and increase the number of flowers per plant.</b> Applications of ProGibb 4% have been shown to increase flowering of Araceae	250-500  250-500  250-500	For one to four consecutive weeks apply a single foliar application of 250 to 500 ppm. Begin applications at the start of forcing. For best results, thoroughly cover all growing points containing flower buds.
SYNGONIUM	<b>To accelerate bloom and increase the number of flowers per plant.</b> Applications of ProGibb 4% have been shown to increase flowering of Araceae	500-2,000	For one to four consecutive weeks apply a single foliar application of 500 to 2,000 ppm. Begin applications at the start of forcing. For best results, thoroughly cover all growing points containing flower buds.

Note:

◆ Application of ProGibb 4% has been shown to reduce the days to flowering and increase the number of flowers per plant. Apply 1 or 2 applications during the vegetative phase of plant development to induce bloom. On other cultivars, first evaluate ProGibb 4% on a small number of plants **prior to** application of the product on a commercial basis.

- **APPLICATIONS TO CUT FLOWERS**

Apply ProGibb 4% to ornamental plants grown for cut flowers to promote stem elongation and flowering. Applying ProGibb 4% has the potential to dramatically promote flowering in many dicot and some monocot plants.

**NOTE:** ProGibb 4% is very active and application at an excessive rate results in undesirable effects. First evaluate ProGibb 4% on a small number of plants **prior to** application of the product on a widespread basis.

- **CUTFLOWERS**

<b>ASTER</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (ppm a.i.)</b>	<b>APPLICATION TIMING</b>
Aster: <i>Callistephus chinensis</i> Monte Carlo-type Novi-type Belgi-type	<b>To promote stem elongation, and break dormancy.</b> Applications of ProGibb 4% have been shown to increase stem elongation and reduce time to flowering.	50-100	Make 1-3 applications of 50- 100 ppm during the early vegetative period. Apply when plants are 2''- 6'' in height. Keep applications 2-3 weeks apart.
<b>BABY'S BREATH (Gypsophila)</b>			
Gypsophila	To accelerate plant growth, increase number of flowering stems, increase flower number and increase uniformity. Applications of ProGibb 4% have been shown to promote uniform and increased flowering of Gypsophylla.	150-500	Apply 3-4 applications of 150-500 ppm at 4 weeks of growth (after pinching). Keep applications 2 weeks apart.
<b>BELLS OF IRELAND (Moluccella)</b>			
Moluccella	<b>To accelerate plant growth and stem elongation</b> Applications of ProGibb T&O have been shown to promote plant growth and stem elongation of Bells of Ireland.	50-100	Apply when plants are 4''- 8'' in height. Keep applications 2-3 weeks apart.

<b>BUPLUREUM</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (ppm a.i.)</b>	<b>APPLICATION TIMING</b>
Buplureum	<b>To promote plant growth and stem elongation</b> Applications of ProGibb T&O have been shown to promote plant growth and stem elongation of <i>Buplureum sp.</i>	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.
<b>CAMPANULA</b>			
<i>Campanula medium</i>	<b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of <i>Campanula</i>	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.
<b>CANDY TUFT (Iberis)</b>			
<i>Iberis oderata</i>	<b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of Candy Tuft.	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.

<b>COLUMNSTOCK (Matthiola)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (ppm a.i.)</b>	<b>APPLICATION TIMING</b>
Stock	<b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of <i>Matthiola incana</i>	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.
<b>DELPHINIUM</b>			
Delphinium species: including <i>D. elatum</i> , <i>D. grandiflorum</i> , <i>D. belladonna</i> , <i>D. bellamosum</i> , <i>D. cardinale</i> , <i>D. nudicale</i> , and Delphinium hybrids.	<b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of Delphinium	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.
<b>DIDISCUS (Trachyme)</b>			
Trachyme	<b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of Didiscus	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.

HYDRANGEA			
CROP/VARIETY	OBJECTIVE/BENEFIT	RATE (ppm a.i.)	APPLICATION TIMING
Hydrangea	<p><b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of Hydrangea</p>	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.
LARKSPUR			
Larkspur <i>Consolida ambigua</i> , <i>C. orientalis</i> , <i>Delphinium ajacis</i>	<p><b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of Larkspur</p>	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.
LISIANTHUS ( <i>Eustoma</i> )			
Lisianthus	<p><b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of <i>Eustoma grandiflora</i>.</p>	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.

<b>PHLOX</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (ppm a.i.)</b>	<b>APPLICATION TIMING</b>
Phlox <i>Phlox paniculata</i> and <i>Drummondii</i> <i>hybrida</i>	<b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of Phlox	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.
<b>QUEEN ANNE'S LACE (Ammi)</b>			
Queen Anne's Lace	<b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of Queen Anne's Lace	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.
<b>SAFFLOWER (Carthamus)</b>			
Safflower	<b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of <i>Safflower</i>	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.

<b>SOLIDASTER (Solidago)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (ppm a.i.)</b>	<b>APPLICATION TIMING</b>
Solidaster	<b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of Solidago.	50-100	Apply as a foliar spray when plants are 4" - 8" in height. Keep applications 2-3 weeks apart.
<b>STATICE (Limonium)</b>			
Statice	<b>For earlier flowering and increased flower yield.</b> Applications of ProGibb 4% have been shown to decrease the time to flower, increase stem elongation, and increase flower yield of Statice.	400-500	Apply as a foliar spray 10 ml (0.33 fl. oz.) of a 400 to 500 ppm solution to each plant when plants are 10 inches or more in diameter (approximately 90 to 110 days after sowing).
Note: ◆ Do not exceed specified rates. ◆ Do not make more than one application. ◆ Accelerated flowering is also influenced by photoperiod, nutrition, and temperature.			
Statice	<b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of Statice	50-100	Apply as a foliar spray when plants are 4" - 8" in height. Keep applications 2-3 weeks apart.

<b>SUNFLOWER (Helianthus)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (ppm a.i.)</b>	<b>APPLICATION TIMING</b>
Sunflower	<p><b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of Sunflower</p>	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.
<b>SWEET WILLIAM (Dianthus)</b>			
Sweet William	<p><b>To promote plant growth and stem elongation.</b> Applications of ProGibb 4% have been shown to promote plant growth and stem elongation of Sweet William</p>	50-100	Apply as a foliar spray when plants are 4"-8" in height. Keep applications 2-3 weeks apart.

- **APPLICATIONS TO TURFGRASS**

Foliar applications of ProGibb 4% have been shown to initiate or maintain growth and/or prevent color change during periods of cold stress on Bermudagrass grown in golf courses, parks and turf farms.

<b>TURF (GOLF COURSES, PARKS AND TURF FARMS)</b>			
Cool Weather Application			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (grams of a.i./acre)</b>	<b>APPLICATION TIMING</b>
Bermudagrass (Tifdwarf, Tifgreen, and other cultivars)	<b>To initiate or maintain growth and prevent color change during periods of cold stress and light frosts.</b>	10-25	Apply 10 grams a.i./acre weekly or 25 grams a.i./acre biweekly in 25-100 gallons of water/acre.
NOTE: <ul style="list-style-type: none"> <li>• Maintain adequate moisture and proper fertilization programs as required for the local area.</li> <li>• Keep applications of the high rate at least two weeks apart.</li> <li>• Do not use on dormant turf</li> <li>• Discontinue treatments if thinning is observed. More frequent mowing is occasionally necessary.</li> </ul>			
Warm Weather Application			
Bermudagrass  Tifdwarf, Tifgreen	<b>To maintain or enhance regrowth of golf course Bermudagrass during summer months.</b>	1-3	Apply 1-to-3 grams a.i./acre weekly in 25-100 gallons of water/acre.
NOTE: <ul style="list-style-type: none"> <li>• Maintain adequate moisture and proper fertilization programs as instructed for your local area.</li> <li>• Keep applications of the high rate at least two weeks apart.</li> <li>• Do not use on dormant turf</li> <li>• Discontinue treatments if thinning is observed. More frequent mowing is occasionally necessary.</li> </ul>			

**BEDDING PLANTS, ANNUAL AND PERENNIAL POTTED CROPS (for example: Tree Form Azalea, Flowering Chrysanthemum, Poinsettia) FIELD-GROWN ORNAMENTALS AND BULB CROPS**

**Application Instructions for Promotion of Plant Growth**

Apply ProGibb 4% to bedding plants, annual and perennial potted crops, and bulb crops to promote plant growth. Applying ProGibb 4% has the potential to dramatically promote plant growth of most dicot and some monocot plants. Additionally, utilize a foliar ProGibb 4% application to overcome over-applications of a gibberellin-inhibiting plant growth regulator.

- When applying ProGibb 4% to promote plant growth, start with 1 ppm unless previous experience warrants higher use rates.
- If desired plant results are not achieved, a reapplication or an increase in rate is often warranted.

**NOTE:** ProGibb 4% is very active and application at an excessive rate results in undesirable stem elongation. First evaluate ProGibb 4% on a small number of plants **before** application of the product on a widespread basis.

Rate (ppm) (parts per million)	Timing	Method
1 to 25	<i>Apply a single application directly to plant foliage</i>	Foliar application

• **VEGETABLE CROPS**

<b>VEGETABLE CROPS</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/ BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
Artichoke	To accelerate maturity and shift harvest to an earlier date	10 – 20	For perennials: apply 1-3 applications at bud initiation stage. For annuals: apply 1-4 applications at 2-week intervals, beginning at the fourth true leaf. Use sufficient water volume to ensure thorough wetting of the entire plant (leaves, stems and buds).
Carrots, Fresh and Processing	To delay leaf senescence. Maintaining vigorous foliage has been shown to help reduce the incidence of infection by <i>Alternaria dauci</i> .	1-6	Make the first application 4-6 weeks after emergence using commercial ground or aerial equipment with spray concentrations of 20-30 ppm. In severe disease situations or cool weather a second spray 14 days later is sometimes required to achieve the desired amount of foliar recovery. Do not apply more than twice per crop.
<b>NOTE:</b> Dilutions of greater concentration can increase the risk of excessive top growth, particularly with a second application.			
Celery	To increase plant height and yield and to overcome stress due to cold weather conditions or saline soils, and obtain earlier maturity.	2.5 – 10	Make a single application 1-4 weeks prior to harvest. Use 25-50 gallons of water per acre by ground application or 5-10 gallons of water per acre for aerial application (except in California). Use lower concentrations if applying 3-4 weeks before harvest and higher concentrations within 1-2 weeks before harvest.

**NOTE:**  
Do not apply by air in California. Do not apply earlier than 4 weeks before harvest as bolting has been known to occur.

<b>VEGETABLE CROPS (con't)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
Cucumber (Not for use in California)	To stimulate fruit set during periods of cool temperatures.	1-4	Make 1 application prior to bloom followed by 2 additional applications at intervals of 10-14 days. It is acceptable to use up to 4 applications. Use sufficient water volume for thorough coverage of exposed foliage.

**NOTE:**  
For maximum benefits, vines must be in good condition, except for reduced rate of growth due to cool temperatures.

Lettuce for Seed	To obtain uniform bolting and increase seed production	1-4	Apply 1 - 4 applications at 2-week intervals, beginning at the fourth true leaf. Use sufficient water volume to ensure thorough wetting.
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Melon (Not for use in California)	To stimulate fruit set during periods of cool temperatures	1-4	Make 1 application prior to bloom followed by 2 additional applications at intervals of 10-14 days on cantaloupes and watermelons.
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**NOTE:**  
For maximum benefits, vines must be in good condition, except for reduced rate of growth due to cool temperatures.

<b>VEGETABLE CROPS (con't)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
Pepper (Not for use in California)	To promote plant growth	1-3	Apply 1-2 sprays in 25-50 gallons of water per acre at 2-week intervals. Begin sprays 2 weeks after transplanting.
NOTE: This use is best for areas with short growing seasons, or when low temperatures slow plant growth.			
Pepper (Not for use in California)	To increase fruit set and promote fruit growth	1-3	Apply 1-2 sprays in 25-50 gallons of water per acre at weekly intervals during the flowering period.
NOTE: The high rate is most efficacious for areas and/or varieties with pollination and/or fruit set problems.			
Pepper (Not for use in California)	To increase fruit size	1-3	Apply in 25-50 gallons of water per acre at the beginning of the picking period.
NOTE: The high rate is best for plants with heavy fruit loads.			
Potato seed	To stimulate uniform sprouting to aid in maximum production, more uniform development, fewer late maturing plants, and to break dormancy of newly harvested potatoes that have not had a full rest period.	0.2- 0.4 (g a.i in 100 gallons)	Dip whole or cut seed pieces in a solution containing 0.2-0.4 g a.i.) in 100 gallons of water prior to planting.
NOTE: Under high soil temperatures use the minimum concentration for dormant seed. Do not treat rested seed pieces.			

<b>VEGETABLES (Con't)</b>			
<b>CROP/VARIETY</b>	<b>OBJECTIVE/BENEFIT</b>	<b>RATE (g a.i. /acre)</b>	<b>APPLICATION TIMING</b>
Rhubarb	To break dormancy on plants receiving insufficient chilling and to increase marketable yield of forced rhubarb	10 – 20 (g a.i. in 10 gallons)	1) When the rest period is not completely broken, make a single application of 2 fl oz (60 ml) of a solution containing 20 g a.i. in 10 gallons of water to each cleaned crown. 2) When the rest period is broken by cold weather, apply 2 fl oz (60 ml) of a solution containing 10 g a.i. in 10 gallons of water to each cleaned crown.
NOTE: Keep forcing house temperatures at 40 – 50oF for 24 hours after application. If house is warmer than 50oF, cover crowns with plastic. Temperatures above 50oF lower yields and cause poor stalk color.			
Spinach, Mustard greens, Collard greens and Turnip greens. (Not for use in California)	To facilitate harvest, increase yield and improve quality of fall and over-winter crops.	4-10	Apply a single spray 10-18 days before each anticipated harvest on fall or over-winter crops, ideally when daytime temperatures are 40o F-70o F and during early morning hours when dew is present on crop. Make applications in 10-50 gallons of water per acre by ground sprayer or in a minimum of 5-10 gallons of water per acre by air. When applied to promote growth of second cutting, wait until some regrowth has started before spraying. Maximum benefit is obtained when below normal temperatures prevail following application and growth would be otherwise slowed in untreated crops.
NOTE: Since the promotion of bolting has been known to occur, do not apply after the mid-winter period or if temperatures are expected to exceed 75o F within several days of application. Do not apply on spring plantings.			

### **STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in a cool, dry place. Keep containers tightly closed when not in use. Keep away from heat and open flame.

**Pesticide Disposal:** To avoid wastes, use all material in this container by application according to label directions. If wastes can not be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

### **NOTICE TO USER**

To the extent permitted by applicable law, seller makes no warranty, express or implied, or merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

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